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## Multiple sequence alignment PS01124, HTH\_ARAC\_FAMILY\_2.

AARP\_PROST/22-120 SEILVWIEGNLTNR.....LSLDDIAQHSGYTKWHLQRVFRKIVGMPLGEYIRRR I  
ADA\_ECOLI/85-183 DKITHACRLLEQETp.....VTLEALADQVAMSPFHLHRLFKATTGMTPKAWQQA W A  
ADA\_MYCTU/87-185 ARAMRLIADGTDR.....DGVSGLAAGLGYTIRQLERLLQAVVGAGPLALARAQ M  
ADA\_SALTY/94-183 -----LEQET.....pVTLAFLAQAVAMSPFHLHRLFKASTGMTPKGWOQA W A  
ADAA\_BACSU/102-200 DLITEYIDKNFTEK.....LTLESLADICHGSPYMHRTFKKIKGITLVEYIQOV V  
ADIY\_ECOLI/149-246 DSVYQIIESDIHKD.....WNLSMVASCLCLSPSLKKKLKSENT-SYSQIITTC M  
AGGR\_ECOLI/164-261 DKVRNTIEKDLSKR.....WTLAIADFNVEITIRKRLESEYI-TFNQILMQS M  
APPY\_ECOLI/139-236 CKITGIISFNIERQ.....WHLKDIAELIYTSLSIKKRLRDEGT-SFTEILRDT M  
ARAC\_CITFR/180-279 RDACQYISDHLADSn.....FDIASVAQHVCCLSPRSLSHLFRQQLGISVLSWREDQ I  
ARAC\_ECOLI/180-279 REACQYISDHLADSn.....FDIASVAQHVCCLSPRSLSHLFRQQLGISVLSWREDQ I  
ARAC\_ERWCH/186-284 IEACQFITSNLAGE.....LRIDEVARHVCLSPRSLAHLFREQVGINILRWREDQ V  
ARAC\_SALTY/180-279 RDACQYISDHLADSh.....FDIASVAQHVCCLSPRSLSHLFRQQLGISVLSWREDQ I  
ARAL\_STRAT/202-300 ASALTFLHRDPAHS.....WTVAELASAAVSRSTLAARFKATVGQGPLEYLTRW I  
ARAL\_STRLI/202-300 ATALTCLHRDPAHS.....WTVADLADTAAVSRSTLAARFKATVGQGPLEYLTRW I  
CAFR\_YERPE/8-107 NSIIQYIEENLESkf.....INIDCLVLYSGFSRRLYQISFKEYVGMPIGTYIRVR A  
CELD\_ECOLI/168-274 DDVPQWLKSTVEKMDkqfseSALENMVALSAKSQYELTRATQRYYGKTPMQIINEI I  
CFAD\_ECOLI/164-261 DKVRNVIEKDLSRK.....WTGLIADAFNVSEITIRKRLESENT-NFNQILMQ L M  
CSVR\_ECOLI/166-263 DKVRGVIEKDLSRK.....WTLAIADFNVEITIRKRLESEDt-NFNQILMQS M  
ENVY\_ECOLI/149-246 DSVCRIIQSDIQHY.....WNLRIVASSCLSPSLKKKLKKNENT-SYSQIVTEC M  
EUTR\_ECOLI/243-344 SRAREYVLENMSEP.....VTVDLCNLQHLVSRRTLQNAFAHILGIGPNAWLKRI L  
EUTR\_SALTY/243-344 SRAREYVLENMSEP.....LTVDLCNLQHLVSRRTLQNAFAHILGIGPNAWLKRI L  
EXSA\_PSEAE/171-269 ERLQLFMEKHLYNE.....WKLSDFSREFGMLTTFKELFGSVYGVSPRAWISER I  
FAPR\_ECOLI/154-251 ERIVTLFSDLTRK.....WKLSDIAEEMHISEISVRKRLEQECI-NFNQLILDV M  
FEAR\_ECOLI/199-299 QKVVTLIDDNIREEI.....LRPEWIAGETGMSVRSLYRMFADKGL-VVAQYIRNR L  
GADX\_ECO27/145-242 TRVCTVINNNIAHE.....WTLARIASELLMSPSLKKKLREEGT-SYSQLLTEC M  
GADX\_ECO57/145-242 TRVCTVINNNIAHE.....WTLARIASELLMSPSLKKKLREEET-SYSQLLTEC M  
GADX\_ECOLI/145-242 TRVCTVINNNIAHE.....WTLARIASELLMSPSLKKKLREEET-SYSQLLTEC M  
GLXA\_RHIME/223-321 LAVLEKMETAIERP.....LDRTAMARLAGVSPRHLDRLFREHRTGTGLDYREI L  
HRPB\_RALSO/375-477 RRAYRYIIENIERSd.....LTTREVAAHINVTERRALQAFKSAVGMSPSSVIRRM L  
INVE\_SALTY/112-210 YWLVGYLLAQSTSG.....NTMRMLGEDYGVSYTHFRRLCSRALGGKAKSELRNW M  
LACR\_STAXY/174-272 QHAVDFINTNYQKH.....ITVEDVAKSVNITRSHLYKLFKKNLGCSPKEYLTYI M  
LCRF\_YERPE/167-265 ERLQKFMEENYLOQ.....WKLSKFAREFGMLTTFKELFGTVYGISPRAWISER I  
LUMQ\_PHOLE/148-246 VLIDNYIEQHLQKK.....ISVAELSSVAFLAQSQFYALFKSQMGITPHQYVLRK L  
MARA\_ECOLI/14-112 HSILDWIEDNLESP.....LSLEKVSERSGYSKWHLQRMFKKETGHSLSGQYIRSR M  
MARA\_SALTY/14-112 HSILDWIEDNLESP.....LSLEKVSERSGYSKWHLQRMFKKETGHSLSGQYIRSR M

Fig. 1A

MELR_ECOLI/194-292	SQMLGFIAENYDQA.....LTINDVAEHVKLNANYAMGIFQRMVQLTMKQYITAM I
MMSR_PSEAE/201-299	DGLHAYMREHLHAR.....LELERLAAFCNLRSKHFHVSRYKAITGRTPIQHFLHL I
MSMR_STRMU/176-274	NQVKKIIHSQYGSS.....LRVNDIAKKNLSRSYLYKIFRKSTNLSIKEYILQV M
MXIE_SHIFL/99-199	YHLVLYLLRTIEKEK.....eVRIKSLTEHYGVSEAYFRSLCRKALGAKVKEQNTW L
MXIE_SHISO/99-199	YHLVLYLLRTIEKEK.....eVRIKSLTEHYGVSEAYFRSLCRKALGAKVKEQNTW L
ORUR_PSEAE/241-338	TRVRRLLIARPGDF.....PDLEQAARELHTSGSLRRHLSSLG-TYQQVLLDV K
PCHR_PSEAE/201-296	HAARDLLVGALEP.....PSLDTLASRVGMNPKLTAGFRKVFASVFGYLQY L
PERA_ECO27/168-265	DRVIKVIELDISKN.....WKLGDVSSMFMSDCLRKQNLKENL-TFKKIMLDI M
POCR_SALTY/195-293	KKALRYIDAHLSDD.....LRLEDVASHVYLSFYFSKLFKKYQIGIFNAWVNRQ M
PQRA_PROVU/7-107	NDILKWLETQLORNe.....gIKIDTIANKSGYSKWHLQRIKDFKGCITLGEYVRKR L
RAFR_PEDPE/176-274	NLAVSYLQENYSTG.....CTIMDLCHYLNLSRSYLYTLFKTHANTSPQKLLTKL L
RAMA_ENTCL/9-107	DTIVIEWIDNHLQP.....LRIEDIARHAGYSKWHLQRLFLQYKGESLGRYIRER L
RAMA_KLEPN/9-107	DTIVIEWIDNHLQP.....LRIDDIARHAGYSKWHLQRLFLQYKGESLGRYIRER L
RHAR_ECOLI/209-307	DKLITRLAASLKSP.....FALDKFCDEASCSESVLRQOFRQQTGMTINQYLRQV V
RHAR_SALTY/179-277	DKLITALANSLECP.....FALDAFCQEQCESSESVLRQOFRQQTGMTINQYLRQV I
RHAS_ECOLI/174-272	NLLLAWLEDHFADE.....VNWDADAVDQFSLSLRTLHRQLKQHTGLTPQRYLNRL L
RHAS_SALTY/174-272	NQLMAWLEDHFAEE.....VCWEAAVAEQFSLSLRTLHRQLKQHTGLTPQRYLNRL L
RHRA_RHIME/210-310	ASIKMRVEQNLANGS.....FSITDVAEAEERTPRAIQKFFSREGT-TFSRYVLGR L
RNS_ECOLI/164-261	DKVRNLIIEKLSRK.....WTGLIIADAFNASEITIRKRLESENT-NFNQIIMQL M
ROB_ECOLI/8-106	ROLLIWLEGLHDQP.....LSLDNVAAGAGYSKWHLQRMFKDVTGHAIGAYIRAR L
SOXS_ECOLI/7-105	QDLIAWIDEHIDQP.....LNIDVAKKSGYSKWHLQRMFRTVTHQTLGDYIRQR L
SOXS_SALTY/7-105	QTLIEWIDEHIDQP.....LNIDVAKKSGYSKWHLQRMFRTVTHQTLGEYIRQR L
TCPN_VIBCH/172-269	EKISCLVKSDITRN.....WRWADICGELRTNRMILKKELESRGV-KFRELINSI I
TETD_ECOLI/31-129	KDVLWIEHNLDQS.....LLDDVANKAGYTKWYFQRLFKKVTGVTILASYIRAR L
THCR_RHOER/227-328	RLAVDYLEAHAQOP.....LTVAQVARNVGVSVRSLOVGFQNSLGTTPMRQLKII M
URER_ECOLI/171-268	QAITHLITQEPQKK.....WHLDDVAKALFTTPSTLRRHLNREGV-SFRQLLLDV M
URER_PROMI/171-268	QAITHLITQDPQPK.....WHLEDVAKTLYTTPSTLRRHLSKEGV-SFCQLLLDV I
VIRF_SHIDY/161-258	DQIRKIVEKNIEKR.....WRLSDISNNLNLSEIAVRKRLESEKL-TFQQLLLDI M
VIRF_YEREN/167-265	ERLQKFMEENYLOQ.....WKLSKFAREFGMGLTTFKELFGTVYGISPRAWISER I
VIRS_MYCTU/236-334	ERVVGLARRLLPTGq.....CSAEAIADQDMHPRTLQRRLAEEGL-RCHDLIERE R
XYLR_ECOLI/288-386	IQAMHYIRNHACKG.....IKVDQVLDVAGISRSNLEKRFKEEVGETIHAMIHAE L
XYLR_HAEIN/288-386	IQAMHYIRHRACHR.....IKVGQVLDHLETSRSNLEQRFKNEMNKTTHQVITHEE I
XYLS_PSEPU/214-315	ERVVQFIEENLKN.....ISLERLAELAMMSPRSYLNLFKHAAGTTPKNYIRNR L
XYSI_PSEPU/214-315	ERVVQFIEENLKN.....ISLERLAELAMMSPRSYLNLFKHAAGTTPKNYIRNR L
XYS2_PSEPU/39-140	ERVVQFIEENVKRS.....ISLEQLAELALMSPRSLYTMFEKHTGTTPMNYIRNR L
XYS3_PSEPU/214-315	ERVVQFIEDNLKQS.....ISLERLAELALMSPRSLYTLFEKHAAGTTPKNYIRNR L
XYSA_PSEPU/214-315	ERVVQFIEENLKN.....ISLERLAELALMSPRSLYTLFEKHAAGTTPKNYIRNR L

Fig. 1B



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Y4FK\_RHISN/318-417 LKAEAFMRENLTNP.....VTIEDLAAARCTPRALQRMFRTYRGSGSPMSVLCNY L  
YA52\_HAEIN/194-295 KRINTALIAILOQPqn.....dWHIEQLAEELATMSRANFIRIFQOHIGMSPGRFLTkv L  
YBBB\_BACSU/166-264 ETKHYIETHADTK.....ITLAQLSQMAGISAKHYSEFKWGTQSVTEITKT I  
YBCM\_ECOLI/165-262 SRCYNLLSEPGTK.....WTANKVARYLYISVSTLHRRASEGV-SFQSIILDDV L  
YCGK\_ALTCA/67-163 QNAMLYIENNYFND.....INIDTVAFSVGVSRYLVKQFKLATNKTINNRIIEV I  
YD95\_MYCTU/242-343 RGITALVRSKLFrdsg.....lfPTFTDVAGELDMHPTLRRRLAEEGT-SFRALLGEA S  
YDEO\_ECOLI/137-233 GKVRNIVNMKPAHP.....WKLKDIDCCLYISELLKKKLKQEQT-TFSQILLDA M  
YDIP\_ECOLI/183-281 KDILFYLNNNYREK.....ITLEQLSKKFRASVSYICHEFTKEYRISPINVIQR M  
YEAM\_ECOLI/158-258 PKIRTMVEMMAKGPve.....wGALQWAGFFAMSERNLARLIVKETGLSFQWRQQLQL  
YFIF\_BACSU/192-289 TEVKLHIKDNLSQP.....LKLTDVASHFHISGRHLSRLFAAELGVSYSEFVQNE I  
YHIW\_ECOLI/139-236 GKVERLISFDIAKR.....WYLRDIAERMYTSESLLKKKLQDENT-CFSKILLAS M  
YIDL\_ECOLI/197-295 EKLIATLHASLQOR.....WSVADMAATIPCEAWLRRRLFLRYTGKTPKEYYILDA L  
YIJO\_ECOLI/172-270 EAIRDYIDERYASA.....LTRESVAQAFYISPNYLSHLFQKGTGAIGFNEYLNHT L  
YISR\_BACSU/183-281 WEAARYLQEHYKEK.....TTIKDLSLALHYHODYVSRCMQQVLGVTPAQYTNRV M  
YKGA\_ECOLI/19-117 QOLLEWIECNLEHP.....ISIEDIAQKSGYSRRNIQLLFRNFMHVPLGEYIRKR L  
YKGD\_ECOLI/177-278 PRLGAVIQOMLEMPgh.....awTVESLASIAHMSRASFAQLFRDVSOGTTPLAVLTKL L  
YMCR\_STRLA/184-281 DPLLRAVVVSLEAG.....RSVTATADSVGLGARQLHRRSLAAGFYGPKTLARVL M  
YPDC\_ECOLI/184-282 HSICNWWQDNYAQP.....LTRESVAQFFNITPNHLSKLFQAQHGTMRFIEYVRWV M  
YQHC\_ECOLI/213-311 SRVLKRIENKYTEN.....LSVEQLAAEANMSVSFAHHNFKSVTSTSPQLYLNKY L  
  
CEAAKELQTTNL...QVIDIALKYQ DSQQS AKR KAYLGIS SLYRLS  
RRLRESLAKGE-...SVTTSILNA PDSSSYRKADETLGMTAKQFRHG  
QTARVLIETTNL...PFGDVAFAA SSIRQ NDTVRLACDGT TALRAR  
RRLREALAKE-...PITAAIYRA PDSSSYRHADQTLGMTAKQFRKG  
HAACKYLIQTNK...AIGDIAICV IANAPY ITL KKKTGQT ARFRQM  
RYAVNELMMDGK...NISQVSQSC NSTSY ISV KDFYGMT LHYVSQ  
SKAALLLLDNSY...QISQISNMI SSTSY IRL VKHFGIT KQFLTY  
RYAKKLITSNSY...SINVVQAQK NSTSY ICA KDYYGVT SHYFEK  
SQAKLLLSTTRM...PIATVGRNV DDQLY SRV KKCTGAS SEFRAG  
SQAKLLLSTTRM...PIATVGRNV DDQLY SRV RKRVGVS SDFRRR  
IFRAKLLLOTTQE...SIANIGRW DDQLY SRV KKCTGAS SEFRAG  
SQAKLLLSTTRM...PIATVGRNV DDQLY SRV KKCTGAS SEFRAG  
ELTARQLREGSA...PLAAIAHSV GSESALSVA KRVLGMP GDYRKH  
ELAAARQLREGNA...TLASIAHSV GSESALSVA KRVLGMP GDYRKH  
SRAAAALLRLTRL...TIEISAKLF DSQQT TRE KKIFGYT RQYRMI  
NFAKKQLEMNTNY...SVTDIAFEA SSPSL IKT KKLTSFT KSYRKK  
SKAALLLLENSY...QISQISNMI ISSASY IRV NKHYGVT KQFFTY  
SKAALLLLENSY...QISQISNMI ISSASY IRI NKHFGVTRSSFLII

AARP\_PROST/22-120  
ADA\_ECOLI/85-183  
ADA\_MYCTU/87-185  
ADA\_SALTY/94-183  
ADAA\_BACSU/102-200  
ADIV\_ECOLI/149-246  
AGGR\_ECOLI/164-261  
APPY\_ECOLI/139-236  
ARAC\_CITFR/180-279  
ARAC\_ECOLI/180-279  
ARAC\_ERWCH/186-284  
ARAC\_SALTY/180-279  
ARAL\_STRAT/202-300  
ARAL\_STRLI/202-300  
CAFR\_YERPE/8-107  
CELD\_ECOLI/168-274  
CFAD\_ECOLI/164-261  
CSVR\_ECOLI/166-263

Fig. 1C



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ENVY_ECOLI/149-246	RYAVQMLMDNK...NITQVAQLC	SSTSY ISV KAFYGLT LNYLAK
EUTR_ECOLI/243-344	NAVRRELISPWsqmTVKDAAMQW	WHLGQ ATD QQLFSEK SLTLHQ
EUTR_SALTY/243-344	NAVRRELISPWsqsaTVKDAAMQW	WHLGQ ATD QQLFAEK SLTLHQ
EXSA_PSEAE/171-269	LYAHQLLLNSDM...SIVDIAMEA	SSQSY TQS RRRFGCT SRSRQG
FAPR_ECOLI/154-251	NQAAKFIIRSDH...QIGMIASLV	TSVSY IKT KEYYGVV KKFEIG
FEAR_ECOLI/199-299	DFCADAIRHAADD.eKLAGIGFHW	SDQSH STV KQRFGMT GEYRRK
GADX_ECO27/145-242	QRALQLIVIVG...SIKRVAVSC	HSVSY IYV RNYIGMT TEYQER
GADX_ECO57/145-242	QRALQLIVIHGF...SIKRVAVSC	HSVSY IYV RNYIGMT TEYQER
GADX_ECOLI/145-242	QRALQLIVIHGF...SIKRVAVSC	HSVSY IYV RNYIGMT TEYQER
GLXA_RHIME/223-321	RHARLLQQSPL...SIPETIAYAT	SSPAH SNA KRLFSQT GSLRRR
HRPB_RALSO/375-477	EGIRSDLLDSERNpsNIIDTASRW	IRRSALVKG RKQFNEA SETIWR
INVF_SALTY/112-210	AQSLLSVEGHE...NITQLAVNH	SSPSH SSEIKELIGVS RKLNSI
LACR_STAXY/174-272	YHASQLLIHTST...LISDISRQV	KDPLL SKN TKHFEISASEYRHH
LCRF_YERPE/167-265	LYAHQLLLNGKM...SIVDIAMEA	SSQSY TQS RRRFGCT SQARLT
LUMQ_PHOLE/148-246	DLAKQLIAERQK...PLSQVAQLC	SSQSS SQA RRLYGMS TRYQFF
MARA_ECOLI/14-112	TEIAQKLKESNE...PILYLAERY	ESQQTLLTRT KNYFDVP HKYRMT
MARA_SALTY/14-112	TEIAQKLKESNE...PILYLAERY	ESQQTLLTRT KNYFDVP HKYRIT
MEIR_ECOLI/194-292	NHVRALLSDTK...SILDIALTA	RSSSR YST GKYVGMS QQYRKL
MMSR_PSEAE/201-299	EYACQLLDSSDQ...SVARVGQAV	DDSYI SRL SKVMGLS SAYRQR
MSMR_STRMU/176-274	KRSQYLLENPKL...SIAFISNSV	SDSLA SKA KNYFGKS SKFRKE
MXIE_SHIFL/99-199	VNGLLDVFLHNQ...TITSAAMNN	RSTSH SNEIKTRLGFSARELSNI
MXIE_SHISO/99-199	VNGLLDVFLHNQ...TITSAAMNN	ASTSH SNEIKTRLGFSARELSNI
ORUR_PSEAE/241-338	RLALQYLTTLTQL...PLYEIALLL	NDSSN RRA RKTGKL SDYREA
PCHR_PSEAE/201-296	REAHRLMCDEEA...NVSTVAYRV	S-PAH SIA RKRYGIS SEIR--
PERA_ECO27/168-265	KHASLFLRTTDK...NIDEISCLV	NSTSY IKV KEYYNTT KKYNGV
POCR_SALTY/195-293	VSARELLCHSDW...STIASIARNL	SQTSY CKV RQTYQVT QAYRQQ
PQRA_PROVU/7-107	LEAAKSLQEKDM...SILDIALMY	SSQAT TRI KKHFNNT AKFREN
RAFR_PEDPE/176-274	EDAKQRLSTSN...SVQSIAANMV	KDSFT SKA KRYSGAS SYRKS
RAMA_ENTCL/9-107	LLAARDLRESDE...RVYEICLRY	ESQQT TRI TRTFHQV GAYRKE
RAMA_KLEPN/9-107	LLAARDLRTDQ...RVYDICKLY	DSQQT TRV TRTFNQV GAYRKE
RHAR_ECOLI/209-307	CHAQYLLQHSRL...LISDISTEC	EDSNY SVV TRETGMT SQWRHL
RHAR_SALTY/179-277	CHAQYLLQHSPL...MISEISMQC	EDSNY SVV TRETGMT SQWRHL
RHAS_ECOLI/174-272	MKARHLLRHSEA...SVTDIAYRC	SDSNH STL RREFNWS RDIRQG
RHAS_SALTY/174-272	IKARHLLRHSDH...SVTEIAYRC	GDSNH STL RREFNWS RDIRQG
RHRA_RHIME/210-310	SLAKSLILAEGEa.tSISQIAYNV	NDLSY NRT RSRYGVR SDLRRL
RNS_ECOLI/164-261	SKAALLLENSY...QISQISNMI	ISSASY IRI NKHYGVV KQFFTY

Fig. 1D



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ROB_ECOLI/8-106	SKSAVALRLTAR...	PILDIALQYR	DSQQT	TRA	KKQFAQT	ALYRRS
SOXS_ECOLI/7-105	LLAAVELRTTER...	PIFDIAMDL	VSQQT	SRV	RRQFDR	SDYRHR
SOXS_SALTY/7-105	LLAAVELRTTER...	PIFDIAMDL	VSQQT	SRV	RREFDR	SDYRHR
TCPN_VIBCH/172-269	SYSISLMTGEF...	KIKQIAYQS	ASVSY	STV	KSTMVA	SEYLFM
TETD_ECOLI/31-129	TKAAVELRLTKK...	TILEIALKYQ	DSQQS	TRR	KYIFKVT	SYRRN
THCR_RHOER/227-328	QKARKDLLRADPase	GVTEIAQRW	LHVGR	AGE	KQTFGVS	SEDLRT
URER_ECOLI/171-268	GMALNYLTFSNY...	SVFQISHRC	GSNAY	CDV	KRYNMT	SQFRLQ
URER_PROMI/171-268	PIALNYLTFSNY...	SVFQISHRC	GSNAY	CDA	KRYGMT	SQFRTQ
VIRE_SHIDY/161-258	HHAAKLLLSQS...	YINDVSRLI	ISSPSY	IRK	NEYGIT	KKFYLY
VIRE_YEREN/167-265	LYAHQLLLGKM...	SIVDIAMEA	SSQSY	TQS	RRFGCT	SQARLT
VIRS_MYCTU/236-334	AQAARYLAQPL...	YLSQIAVLL	SEQSALNRSCRRW	FGMT	RQYRAY	
XYLR_ECOLI/288-386	EKARSLIISTTL...	SINEISQMC	PSLQY	YSV	KKAYDTT	KEYRDV
XYLR_HAEIN/288-386	SRAKNLLQOTDI...	SIKEITEIC	PSIQY	YSV	KKEFEMT	KEFRLN
XYLS_PSEPU/214-315	ESIRACLNDPAnvr	SITEIALDY	LHLGR	AEN	RSAFGEL	SDTLRQ
XYSI_PSEPU/214-315	ESIRACLNDPAnvr	SITEIALDY	LHLGR	AEN	RSAFGEL	SDTLRQ
XYS2_PSEPU/39-140	ECVRACLSNPTTnir	SITEIVALDY	LHLGR	AEK	RSTFGEL	SDTLSL
XYS3_PSEPU/214-315	ECIRARLSDPNAnvr	SVTEMALDY	FHTGR	AEN	RSTFGEL	SDTLRR
XYS4_PSEPU/214-315	ECIRARLSDPNAnvr	SVTEMALDY	FHTGR	AEN	RSTFGEL	SDTLRR
Y4FK_RHISN/318-417	AAAHGAIKAGrag...	SITELALNIQ	SNPGR	SVL	KSAYGLS	SSALRF
YA52_HAEIN/194-295	QSAAFLLKQSQ...	SVLAIALEV	QSEAH	CKV	KNYYQLS	SQYRKS
YBBB_BACSU/166-264	TKAKRLMAKSN...	KLKEIAHQT	QDEFY	SRI	KKYTGCS	TSYMKK
YBCM_ECOLI/165-262	NNALSAIQTTVK...	PISEIAREN	KCPSR	TER	HNRFNIT	REIRKA
YCGK_ALTCA/67-163	EQAKVLLKK--...	SVTETAYEV	NNSNY	ATV	KKRTNYT	KQFKRT
YD95_MYCTU/242-343	TVAVDLLRNUGL...	TVQQVSTRL	TEVST	SHA	KRWYGVA	SEYSRR
YDEO_ECOLI/137-233	QHAKNLIRVEG...	SVNKIAEQC	ASTSY	IYA	RKHFGNS	KRVSK
YDIP_ECOLI/183-281	TEAKWSLTNTEL...	SQAEISWRV	ENVDH	AKL	LRHVCS	SDYRRQ
YEAM_ECOLI/158-258	IMALQGLVKGD...	TVQKVAAHTL	DSTTA	ITM	KKGLGQT	GRIAR
YFIF_BACSU/192-289	NKAAELLKSTNL...	SIKEIAEEI	S-VHY	TRV	SAKIGSS	GLFRSL
YHIW_ECOLI/139-236	SMARRLLELRQI...	PLHTIAEKC	SSTSY	INT	RQYGV	HQFAQH
YIDL_ECOLI/197-295	DIALSLKQQGN...	SVGEVADTLN	FDSFH	SKA	KKHFGYA	SAVLKN
YIJO_ECOLI/172-270	EHAKTLLKGYDL...	KVKEVAHAC	VDSNY	CRL	RKNTERS	SEYRRQ
YISR_BACSU/183-281	TEAKRLLSSTND...	KMGVIAETV	MEDPTY	SKL	KQIEGIS	IEYRKI
YKGA_ECOLI/19-117	CRAAILVRLTAK...	SMLDIALSLH	DSQQS	SRE	KKLFGCS	REYRHR
YKGD_ECOLI/177-278	QIAAQMFSTRETL...	PVVVIAESV	ASESS	HKA	VREFGCT	GEYRER
YMCN_STRIA/184-281	QRAILRLARAGV...	PFAETATLA	ADQAH	LARDV	REMAGSSLS	SELVER
YPDC_ECOLI/184-282	AKARMILQKYHL...	SIHEVAQR	PDSY	CRV	RRQFGLT	GEYSAR
YQHC_ECOLI/213-311	HKARMMIHDGM...	KASAAAMRV	ESASQ	SRE	KRYFGVT	GEDAAR

Fig. 1E



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MarA protein (BAA15221)

MTMSRRNTDAITHSILDWIEDNLESPLSLEKVSERSGYSKWHLQRMFKKETGHS LG  
QYIRSRKMTEIAQKLKESNEPILYLAERYGFESQQTLTRTFKNYFDVPPHKYRMTNM  
QGESRFLHPLNHYS

Rob protein (AAC73403)

MRYDKELTENEMIRQKILQQLLEWIECNLEHPISIEDIAQKSGYSRRNIQLLFRNFMHV  
PLGEYIRKRRL  
CRAAILVRLTAKSMLDIALSLHFDSQQSFSREFKKLFGCSPREYRHRDYWDLANIFPS  
FLIRQQQKTECR  
LINFETPIFGNSFKYDIEVSNKSPDEEVKLRRHHLARCMKNFKTDIYFVSTFEPSTKS  
VDLLTVETFAG TVCEYADMPKEWTTTRGLYDPHVIWTQA

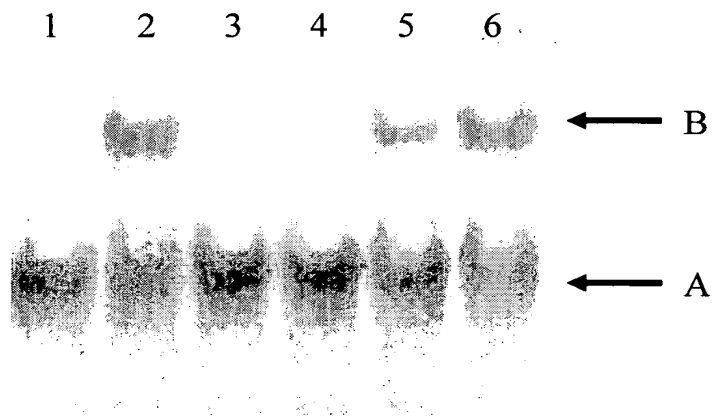
SoxS protein (P22539)

MSHQKIIQDLIAWIDEHIDQPLNIDVVAKKSGYSKWYLQRMFRTVTHQTLGDYIRQR  
RLLLA AVELRTTE RPIFDIAMDLGYVSQQTF SRVFRRQFDRTPSDYRHRL

*Fig. 2*

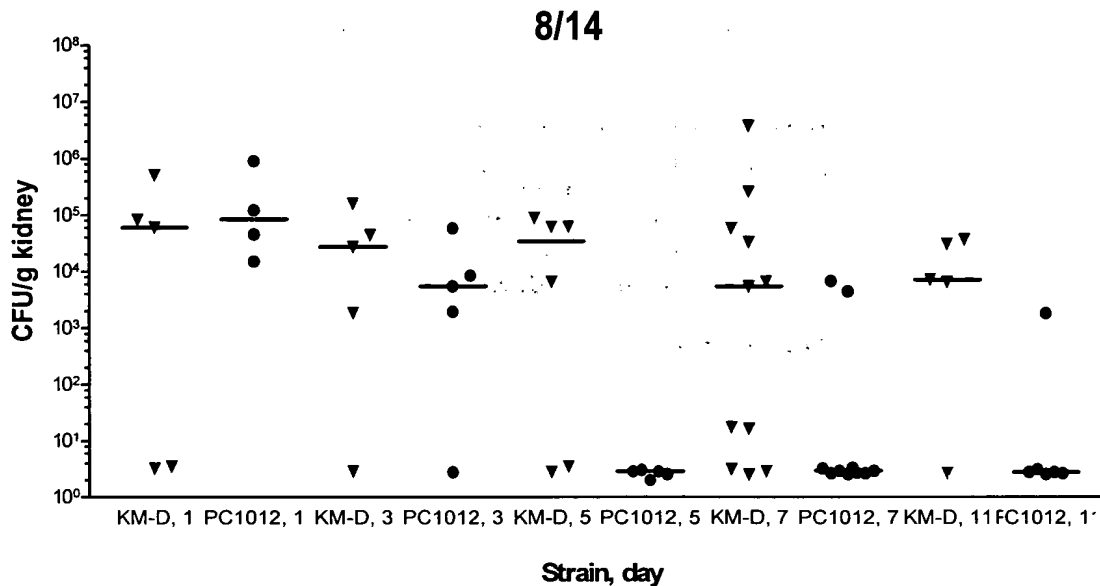


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*Fig. 3*

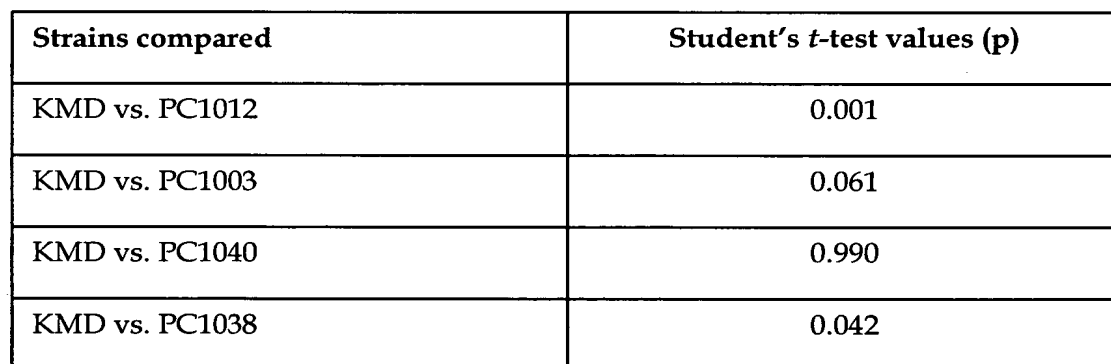




- ▼ KM-D, 1
- PC1012, 1
- ▼ KM-D, 3
- PC1012, 3
- ▼ KM-D, 5
- PC1012, 5
- ▼ KM-D, 7
- PC1012, 7
- ▼ KM-D, 11
- PC1012, 11

Strains compared	Student's <i>t</i> -test values (p)
KMD vs. PC1012, day 1	0.249
KMD vs. PC1012, day 3	0.752
KMD vs. PC1012, day 5	0.018
KMD vs. PC1012, day 7	0.038
KMD vs. PC1012, day 11	0.017

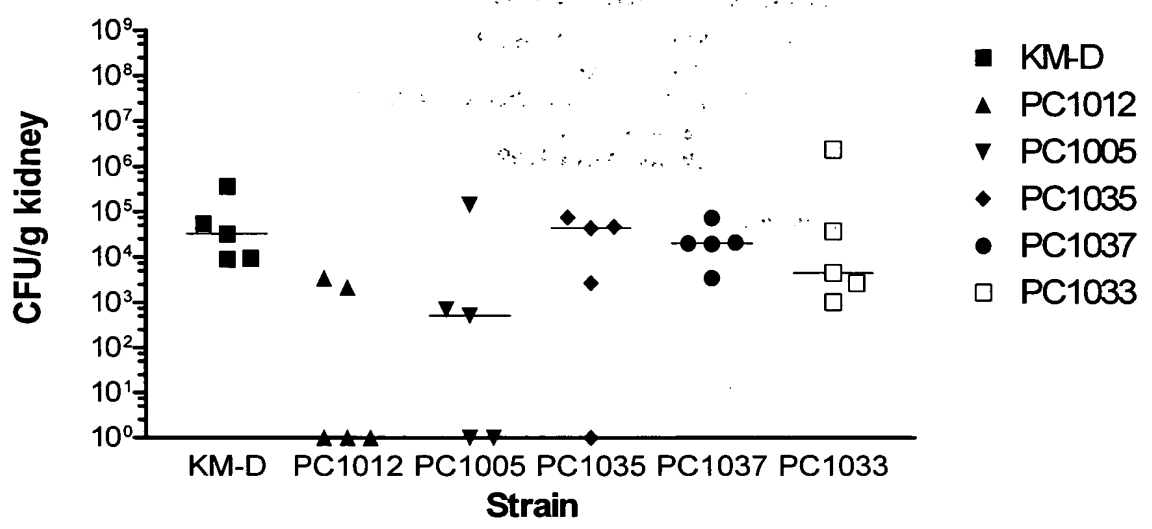
*Fig. 4*



*Fig. 5*



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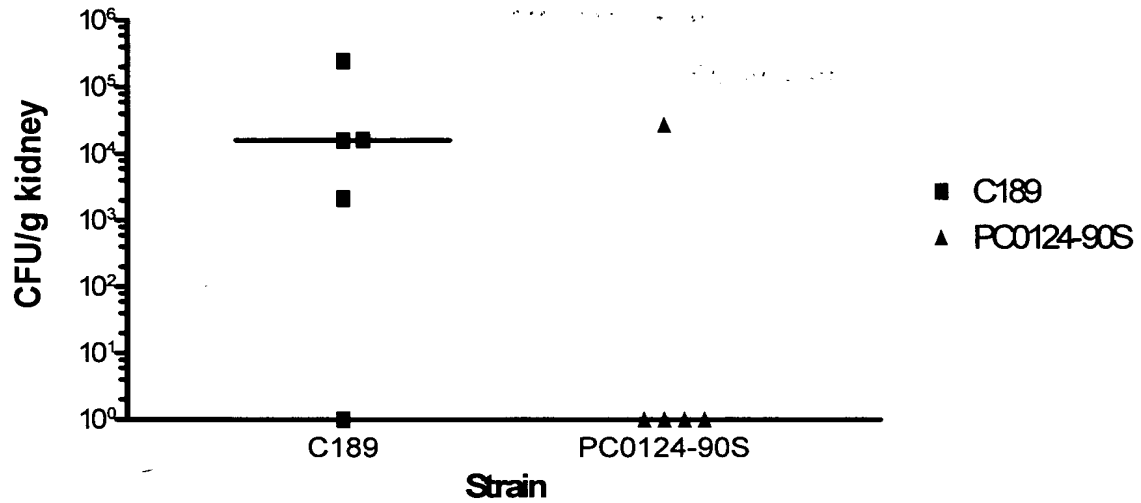


Strains compared	Student's <i>t</i> -test values (p)
KMD vs. PC1012	0.007
KMD vs. PC1005	0.002
KMD vs. PC1035	0.318
KMD vs. PC1037	0.455
KMD vs. PC1033	0.477

Fig. 6



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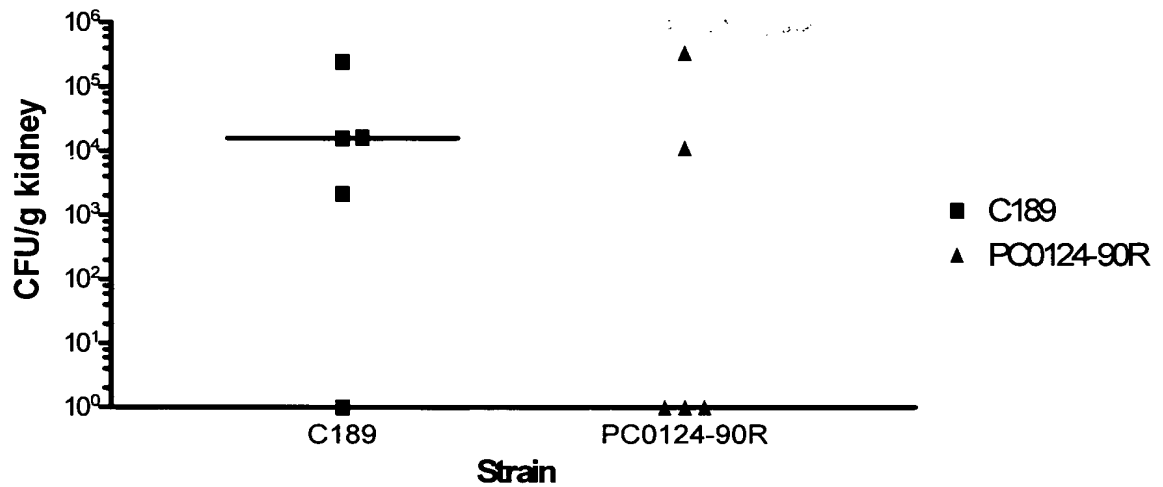


Strain	Student's t-test
C189 vs. PC0124-90S	0.082

*Fig. 7*



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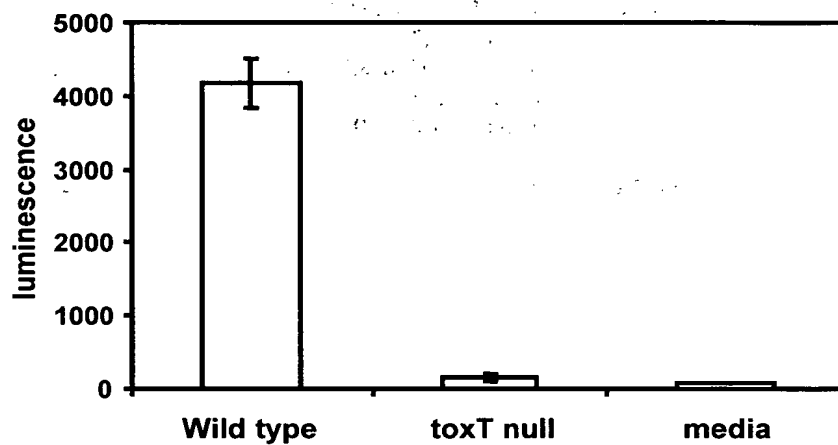


Strain	Student's t-test
C189 vs. PC0124-90R	0.389

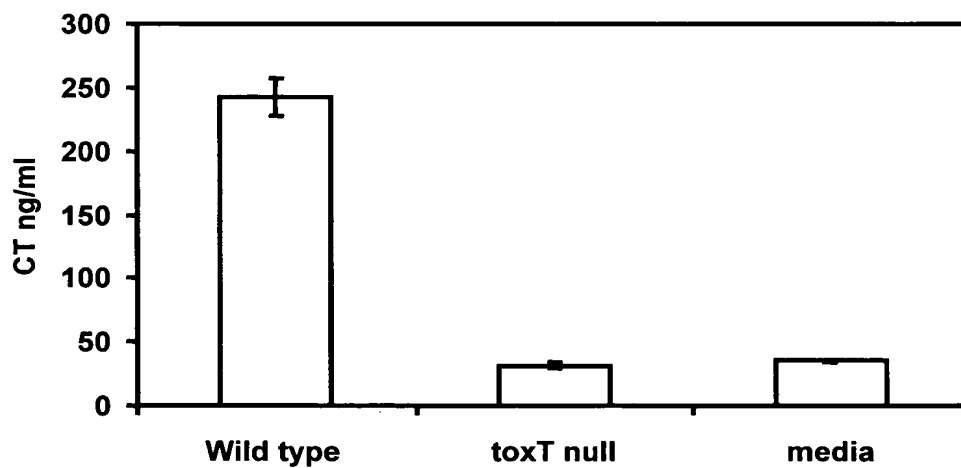
*Fig. 8*



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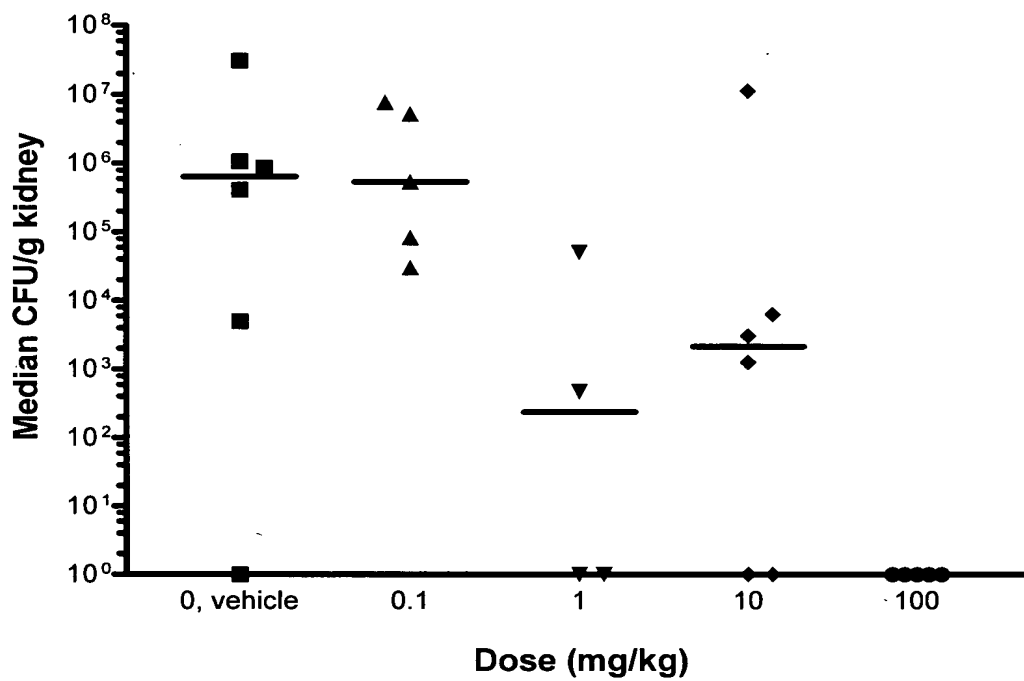


*Fig. 9A*



*Fig. 9B*

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*Fig. 10*